## STIC Biotechnology Systems Branch

## RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

**Application Serial Number:** 

Source:

Date Processed by STIC:

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,

2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE <u>CHECKER</u> <u>VERSION 4.4.0 PROGRAM</u>, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail. Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom. Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

- 1. EFS-Bio (<a href="http://www.uspto.gov/ebc/efs/downloads/documents.htm">httm</a>, EFS Submission User Manual ePAVE)
- 2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
- Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):
   U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street,
   Alexandria, VA 22314

Revised 01/10/06

## Raw Sequence Listing Error Summary

ERROR DETECTED	SUGGESTED CORRECTION SERIAL NUMBER: 10516,159
ATTN: NEW RULES CASES:	PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE
1Wrapped Nucleics Wrapped Aminos	The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
2Invalid Line Length	The rules require that a line <b>not exceed</b> 72 characters in length. This includes white spaces.
3 Misaligned Amino Numbering	The numbering under each 5 <sup>th</sup> amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
4Non-ASCII	The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
5Variable Length	Sequence(s) contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
6PatentIn 2.0 "bug"	A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
7Skipped Sequences (OLD RULES)	Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence:  (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)  (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  This sequence is intentionally skipped
	Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
8Skipped Sequences (NEW RULES)	Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence. <210> sequence id number <400> sequence id number 000
9Use of n's or Xaa's (NEW RULES)	Use of n's and/or Xaa's have been detected in the Sequence Listing.  Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.  In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
10Invalid <213> Response	Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
11Use of <220>	Sequence(s) missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.  (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
12PatentIn 2.0 "bug"	Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
13 Misuse of n/Xaa	"n" can only represent a single <u>nucleotide</u> ; "Xaa" can only represent a single <u>amino acid</u>



PCT

RAW SEQUENCE LISTING

DATE: 07/24/2006

PATENT APPLICATION: US/10/516,759

TIME: 11:03:01

Input Set : N:\DA\pto.da.txt

Output Set: N:\CRF4\07242006\J516759.raw

- 3 <110> APPLICANT: Mingdong Zhou
- 5 <120> TITLE OF INVENTION: ERBB3 BASED METHODS AND COMPOSITIONS FOR TREATING NEOPLASMS
- 7 <130> FILE REFERENCE: 52401-20003.00
- 9 <140 > CURRENT APPLICATION NUMBER: 10/516,759
- C--> 10 <141> CURRENT FILING DATE: 2004-12-02
  - 12 <150> PRIOR APPLICATION NUMBER: PCT/CN03/00217
  - 13 <151> PRIOR FILING DATE: 2003-03-26
  - 15 <150> PRIOR APPLICATION NUMBER: CH 02116259.X
  - 16 <151> PRIOR FILING DATE: 2002-03-26
  - 18 <160> NUMBER OF SEQ ID NOS: 16
  - 20 <170> SOFTWARE: FastSEQ for Windows Version 4.0

Daes Not Comply Corrected Diskette Needed

## **ERRORED SEQUENCES**

22 <210> SEO ID NO: 1

23 <211> LENGTH: 1342

24 <212> TYPE: PRT

25 <213> ORGANISM: Homo sapiens

27 <400> SEOUENCE: 1

29 Met Arg Ala Asn Asp Ala Leu Gln Val Leu Gly Leu Leu Phe Ser Leu

30 1 5 10 15

31 Ata Arg Cly Ser Glu Val Gly Asn Ser Gln Ala Val Cys Pro Gly Thr

33 Leu Asn Gly Leu Ser Val Thr Gly Asp Ala Glu Asn Gln Tyr Gln Thr

34 35 40 45

Leu Tyr Lys Leu Tyr Glu Arg Cys Glu Val Val Met Gly Asn Leu Glu

36 50 55 60

37 He val Leu Thr Gly His Asn Ala Asp Leu Ser Phe Leu Gln Trp Ile

38 65 70 75 80

39 Mrg Glu Var Thr Gly Tyr Val Leu Val Ala Met Asn Glu Phe Ser Thr

**4**0 85 90 95

Pro Asn Leu Arg Val Val Arg Gly Thr Gln Val Tyr Asp 41 Leu Pre-Lea

E--> 42 100 105 110

4) Gly Hys Phe Ala Ile Phe Val Met Leu Asn Tyr Asn Thr Asn Ser Ser

E--> A4 115 120 125

5 His Ala Deu Arg Gln Leu Arg Leu Thr Gln Leu Thr Glu Ile Leu Ser

46 130 135 140

Gly Gry Val Tyr Ile Glu Lys Asn Asp Lys Leu Cys His Met Asp Thr

48 145 150 155 160

Arg Asp Ile Val Arg Asp Arg Asp Ala Glu Ile Val Val He Asp Tip

E--> 50 165 170 175

51 bys Asp Asn Gly Arg Ser Cys Pro Pro Cys His Glu Val Cys Lys Gly

#3 on error summary sheet,

PATENT APPLICATION: US/10/516,759

DATE: 07/24/2006 TIME: 11:03:01

Input Set : N:\DA\pto.da.txt

Output Set: N:\CRF4\07242006\J516759.raw

E--> 52 180 185 190 Arg Cys Trp Gly Pro Gly Ser Glu Asp Cys Gln Thr Leu Thr Lys Thr -> 54 19<sup>5</sup> 200 205 The Cys Ala Pro Gln Cys Asn Gly His Cys Phe Gly Pro Asn Pro Asn E--> 56 210 215 220 Chn eys Cys His Asp Glu Cys Ala Gly Gly Cys Ser Gly Pro Gln Asp E--> 58 225 230 235 240 59 The Asp Cys Phe Ala Cys Arg His Phe Asn Asp Ser Gly Ala Cys Val E--> 60 245 250 255 61 FTC Arg Cys Pro Gln Pro Leu Val Tyr Asn Lys Leu Thr Phe Gln Leu E--> 62 260 265 270 63 Gly Pro Asn Pro His Thr Lys Tyr Gln Tyr Gly Gly Val Cys Val Ala E--> 64 275 280 285 Ser Eys Pro His Asn Phe Val Val Asp Gln Thr Ser Cys Val Arg Ala E--> 66 290 295 300 67 Cys Pro Pro Asp Lys Met Glu Val Asp Lys Asn Gly Leu Lys Met Cys E--> 68 305 310 315 320 69 Glu Pro Cys Gly Gly Leu Cys Pro Lys Ala Cys Glu Gly Thr Gly Ser B--> (0 325 330 335 Gly Sex Arg The Gln Thr Val Asp Ser Ser Asn Ile Asp Gly Phe Val  $E--> \sqrt{2} 340 345 350$ Asp eys The Lys Ile Leu Gly Asn Leu Asp Phe Leu Ile Thr Gly Leu E--> 74 355 360 365 Asn Gly Asp Pro Trp His Lys Ile Pro Ala Leu Asp Pro Glu Lys Leu E--> 76 376 375 380 77 Asn Val Phe Arg Thr Val Arg Glu Ile Thr Gly Tyr Leu Asn Ile Gln E--> 7,8 385 390 395 400 Ser Tro Pro His Met His Asn Phe Ser Val Phe Ser Asn Leu Thr E--> 80 405 410 415 The Gly Gly Arg Ser Leu Tyr Asn Arg Gly Phe Ser Leu Leu Ile E--> 82 (420 425 430 83 Met Lys Asn Leu Asn Val Thr Ser Leu Gly Phe Arg Ser Leu Lys Glu E--> 84/435 440 445 He Ser Ala Gly Arg Ile Tyr Ile Ser Ala Asn Arg Gln Leu Cys Tyr E--> 86 450 455 460 His His Ser Leu Asn Trp Thr Lys Val Leu Arg Gly Pro Thr Glu Glu E--> 88 465 470 475 480 Asp Tle Lys His Asn Arg Pro Arg Arg Asp Cys Val Ala Glu E--> Ø 485 490 495 Gly Lys Wal Cys Asp Pro Leu Cys Ser Ser Gly Gly Cys Trp Gly Pro E--> 82 500 505 510 Cly Pro Chy (in Cys Leu Ser Cys Arg Asn Tyr Ser Arg Gly Gly Val E--> 94 515 520 525 The His Cys Asn Phe Leu Asn Gly Glu Pro Arg Glu Phe Ala E--> 98 530 535 540 Disclu Ala Clu Cys Phe Ser Cys His Pro Glu Cys Gln Pro Met Glu E--> 98 545 550 555 560 Gly The Ale Thr Cys Asn Gly Ser Gly Ser Asp Thr Cys Ala Gln Cys E--> 100 565 570 575

See item#3 on error Summary Sheet.

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RAW SEQUENCE LISTING PATENT APPLICATION: US/10/516,759 TIME: 11:03:01

DATE: 07/24/2006

Input Set : N:\DA\pto.da.txt

Output Set: N:\CRF4\07242006\J516759.raw

101 Ala His Phe Arg Asp Gly Pro His Cys Val Ser Ser Cys Pro His Gly E--> 102 580 585 590 103 Val Leu Gly Ala Lys Gly Pro Ile Tyr Lys Tyr Pro Asp Val Gln Asn E--> 104 595 600 605 105 Glu Cys Arg Pro Cys His Glu Asn Cys Thr Gln Gly Cys Lys Gly Pro E--> 106 610 615 620 107 Glu Leu Gln Asp Yys Leu Gly Gln Thr Leu Val Leu Ile Gly Lys Thr E--> 108 625 630 635 640 109 His Leu Thr Met Ala Leu Thr Val Ile Ala Gly Leu Val Val Ile Phe E--> 110 645 650 655 111 Met Met Leu Gly Gly Thr Phe Leu Tyr Trp Arg Gly Arg Arg Ile Gln E--> 112 660 665 670 113 Asn Lys Arg Ala Met \Arg Arg Tyr Leu Glu Arg Gly Glu Ser Ile Glu E--> 114 675 680 685 115 Pro Leu Asp Pro Ser Glu Lys Ala Asn Lys Val Leu Ala Arg Ile Phe E--> 116 690 695 700 117 Lys Glu Thr Glu Leu Arg Lys Leu Lys Val Leu Gly Ser Gly Val Phe E--> 118 705 710 715 720 119 Gly Thr Val His Lys Gly Val Trp Ile Pro Glu Gly Glu Ser Ile Lys E--> 120 725 730 735 121 Ile Pro Val Cys Ile Lys Val Ile Glu Asp Lys Ser Gly Arg Gln Ser E--> 122 740 745 750 123 Phe Gln Ala Val Thr Asp His Met Leu Ala Ile Gly Ser Leu Asp His E--> 124 755 760 765 125 Ala His Ile Val Arg Leu Leu Gly Leu Cys Pro Gly Ser Ser Leu Gln E--> 126 770 775 780 127 Leu Val Thr Gln Tyr Leu Pro Leu Gly Ser Leu Leu Asp His Val Arg E--> 128 785 790 795 800 129 Gln His Arg Gly Ala Leu Gly Pro Gln Leu Leu Leu Asn Trp Gly Val E--> 130 805 810 815 131 Gln Ile Ala Lys Gly Met Tyr Tyr Leu Glu Glu His Gly Met Val His E--> 132 820 825 830 133 Arg Asn Leu Ala Ala Arg Asn Val Leu Leu Lys Ser Pro Ser Gln Val E--> 134 835 840 845 135 Gln Val Ala Asp Phe Gly Val Ala Asp Leu Leu Pro Pro Asp Asp Lys E--> 136 850 855 860 137 Gln Leu Leu Tyr Ser Gl Ala Lys Thr Pro Ile Lys Trp Met Ala Leu E--> 138 865 870 875 880 139 Glu Ser Ile His Phe Gly Lys Tyr Thr His Gln Ser Asp Val Trp Ser E--> 140 885 890 895 141 Tyr Gly Val Thr Val Trp Glu Leu Met Thr Phe Gly Ala Glu Pro Tyr E--> 142 900 905 910 143 Ala Gly Leu Arg Leu/Ala Glu Val Pro Asp Leu Leu Glu Lys Gly Glu E--> 144 915 920 925 145 Arg Leu Ala Gln Pro Gln Ile Cys Thr Ile Asp Val Tyr Met Val Met E--> 146 930 935 940 147 Val Lys Cys Trp Met Ile Asp Glu Asn Ile Arg Pro Thr Phe Lys Glu E--> 148 945 950 955 960 149 Leu Ala Asn Glu/Phe Thr Arg Met Ala Arg Asp Pro Pro Arg Tyr Leu

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/516,759

DATE: 07/24/2006 TIME: 11:03:01

Input Set : N:\DA\pto.da.txt

Output Set: N:\CRF4\07242006\J516759.raw

E--> 150 965 970 975 151 Val Ile Lys Arg Glu Ser Gly Pro Gly Ile Ala Pro Gly Pro Glu Pro E--> 152 980 985 990 153 His Gly Leu Thr Asn Lys Leu Glu Glu Val Glu Leu Glu Pro Glu E--> 154 995 1000 1005 155 Leu Asp Leu Asp Leu Asp Leu Glu Ala Glu Glu Asp Asn Leu Ala Thr E--> 156 1010 1015 1020 157 Thr Thr Leu Gly Ser Ala Leu Ser Leu Pro Val Gly Thr Leu Asn Arg E--> 158 1025 1030 1035 1040 159 Pro Arg Gly Ser Gln Ser Leu Leu Ser Pro Ser Ser Gly Tyr Met Pro E--> 160 1045 1050 1055 161 Met Asn Gln Gly Asn Leu Gly Glu Ser Cys Gln Glu Ser Ala Val Ser E--> 162 1060 1065 1070 163 Gly Ser Ser Glu Arg Cyb Pro Arg Pro Val Ser Leu His Pro Met Pro E--> 164 1075 1080 1085 165 Arg Gly Cys Leu Ala Sen Glu Ser Ser Glu Gly His Val Thr Gly Ser E--> 166 1090 1095 1100 167 Glu Ala Glu Leu Gln Glu Lys Val Ser Met Cys Arg Ser Arg Ser Arg B--> 163 M305 1110 1115 1120 .... 169 Ser Arg Ser Pro Arg Pro Arg Gly Asp Ser Ala Tyr His Ser Gln Arg E--> 170 1125 1130 1135 171 His Ser Leu Leu Thr Pro Val Thr Pro Leu Ser Pro Pro Gly Leu Glu E--> 172 1140 1145 1150 173 Glu Glu Asp Val Asn Gly Tyr Val Met Pro Asp Thr His Leu Lys Gly E--> 174 1155 1160 1165 175 Thr Pro Ser Ser Arg Glu dly Thr Leu Ser Ser Val Gly Leu Ser Ser E--> 176 1170 1175 1180 177 Val Leu Gly Thr Glu Glu Asp Glu Asp Glu Glu Tyr Glu Tyr Met E--> 178 1185 1190 1195 1200 179 Asn Arg Arg Arg His Ser Pro Pro His Pro Pro Arg Pro Ser Ser E--> 180 1205 1210 1215 181 Leu Glu Glu Leu Gly Tyr dlu Tyr Met Asp Val Gly Ser Asp Leu Ser E--> 182 1220 1225 1230 183 Ala Ser Leu Gly Ser Thr \$ln Ser Cys Pro Leu His Pro Val Pro Ile E--> 184 1235 1240 1245 185 Met Pro Thr Ala Gly Thr Thr Pro Asp Glu Asp Tyr Glu Tyr Met Asn E--> 186 1250 1255 1260 187 Arg Gln Arg Asp Gly Gly Gly Pro Gly Gly Asp Tyr Ala Ala Met Gly E--> 188 1265 1270 1275 1280 189 Ala Cys Pro Ala Ser Gl/u Gln Gly Tyr Glu Glu Met Arg Ala Phe Gln E--> 190 1285 1290 1295 191 Gly Pro Gly His Gln Ala Pro His Val His Tyr Ala Arg Leu Lys Thr E--> 192 1300 1305 1310 193 Leu Arg Ser Leu Glu/Ala Thr Asp Ser Ala Phe Asp Asn Pro Asp Tyr E--> 194 1315 1320 1325 195 Trp His Ser Arg Leu Phe Pro Lys Ala Asn Ala Gln Arg Thr E--> 196 1330 1335 1340 198 <210> SEQ ID NO: /2 199 <211> LENGTH: 64/0

Sameerror

PATENT APPLICATION: US/10/516,759

DATE: 07/24/2006 TIME: 11:03:01

Input Set : N:\DA\pto.da.txt

Output Set: N:\CRF4\07242006\J516759.raw

200 <212> TYPE: PRT

201 <213> ORGANISM: Homo sapiens

203 <400> SEQUENCE: 2

205 Met Arg Ala Asn Asp Ala Leu Gln Val Leu Gly Leu Leu Phe Ser Leu

E--> 206 1 5 10 15

207 Ala Arg Gly Ser Glu Val Gly Asn Ser Gln Ala Val Cys Pro Gly Thr

E-:-> 208 20 25 30

209 Leu Asn Gly Deu Ser Val Thr Gly Asp Ala Glu Asn Gln Tyr Gln Thr

E--> 210 35 40 45

211 Leu Tyr Lys Leu Tyr Glu Arg Cys Glu Val Val Met Gly Asn Leu Glu

E--> 212 50 55 60

213 Ile Val Leu Thr Gly His Asn Ala Asp Leu Ser Phe Leu Gln Trp Ile

E--> 214 65 70 75 80

215 Arg Glu Val Thr Gly Tyr Val Leu Val Ala Met Asn Glu Phe Ser Thr

E--> 216 85 90 95

217 Leu Pro Leu Pro Asn\Leu Arg Val Val Arg Gly Thr Gln Val Tyr Asp

E--> 218 100 105 110

219 Gly Lys Phe Ala Ile Rhe Val Met Leu Asn Tyr Asn Thr Asn Ser Ser

\* 34.-> 220 115 120 125

221 His Ala Leu Arg Gln Leu Arg Leu Thr Gln Leu Thr Glu Ile Leu Ser

E--> 222 130 135 140

223 Gly Gly Val Tyr Ile Gl $\psi$  Lys Asn Asp Lys Leu Cys His Met Asp Thr

E--> 224 145 150 155 160

225 Ile Asp Trp Arg Asp Ile Val Arg Asp Arg Asp Ala Glu Ile Val Val

E--> 226 165 170 175

227 Lys Asp Asn Gly Arg Ser\Cys Pro Pro Cys His Glu Val Cys Lys Gly

E--> 228 180 185 190

229 Arg Cys Trp Gly Pro Gly Ser Glu Asp Cys Gln Thr Leu Thr Lys Thr

E--> 230 195 200 205

231 Ile Cys Ala Pro Gln Cys Asn Gly His Cys Phe Gly Pro Asn Pro Asn

E--> 232 210 215 220

233 Gln Cys Cys His Asp Glu tys Ala Gly Gly Cys Ser Gly Pro Gln Asp

E--> 234 225 230 235 240

235 Thr Asp Cys Phe Ala Cys Arg His Phe Asn Asp Ser Gly Ala Cys Val

E--> 236 245 250 255

237 Pro Arg Cys Pro Gln Pro Leu Val Tyr Asn Lys Leu Thr Phe Gln Leu

E--> 238 260 265 270

239 Glu Pro Asn Pro His Thr Lys Tyr Gln Tyr Gly Gly Val Cys Val Ala

E--> 240 275 280 285

241 Ser Cys Pro His Asn Phe Val Val Asp Gln Thr Ser Cys Val Arg Ala

E--> 242 290 295 300

243 Cys Pro Pro Asp Lys Met/Glu Val Asp Lys Asn Gly Leu Lys Met Cys

E--> 244 305 305 310 315

245 Glu Pro Cys Gly Gly Le/u Cys Pro Lys Ala Cys Glu Gly Thr Gly Ser

E--> 246 320 325 330

247 Gly Ser Arg Phe Gln Arr Val Asp Ser Ser Asn Ile Asp Gly Phe Val

E--> 248 335 340 345

249 Asn Cys Thr Lys Ile Leu Gly Asn Leu Asp Phe Leu Ile Thr Gly Leu

E--> 250 350 355 360

Same

PATENT APPLICATION: US/10/516,759

DATE: 07/24/2006 TIME: 11:03:01

Input Set : N:\DA\pto.da.txt

Output Set: N:\CRF4\07242006\J516759.raw

251 Asn Gly Asp Pro Trp His Lys Ile Pro Ala Leu Asp Pro Glu Lys Leu E--> 252 365 370 375 253 Asn Val Phe Arg Thr Val Arg Glu Ile Thr Gly Tyr Leu Asn Ile Gln E--> 254 380 385 390 400 255 Ser Trp Pro Pro Nis Met His Asn Phe Ser Val Phe Ser Asn Leu Thr E--> 256 405 410 415 257 Thr Ile Gly Gly Ang Ser Lou Tyr, Asn Arg Gly Phe Ser Leu Leu Ile E--> 258 420 425 430 259 Met Lys Asn Leu Asn Val Thr Ser Leu Gly Phe Arg Ser Leu Lys Glu E--> 260 435 440 445 261 Ile Ser Ala Gly Arg\Ile Tyr Ile Ser Ala Asn Arg Gln Leu Cys Tyr E--> 262 450 455 460 263 His His Ser Leu Asn Trp Thr Lys Val Leu Arg Gly Pro Thr Glu Glu E--> 264 465 470 475 480 265 Arg Leu Asp Ile Lys His Asn Arg Pro Arg Arg Asp Cys Val Ala Glu E--> 266 485 490 495 267 Gly Lys Val Cys Asp Pro Leu Cys Ser Ser Gly Gly Cys Trp Gly Pro E--> 268 500 505 510 E--> 268 500 505 510

14 269 Gly Pro Gly Gln Cys Leu Ser Cys Arg Asn Tyr Ser Arg Gly Gly Val E--> 270 515 520 525 271 Cys Val Thr His Cys Asr Phe Leu Asn Gly Glu Pro Arg Glu Phe Ala E--> 272 530 535 540 273 His Glu Ala Glu Cys Phe Ser Cys His Pro Glu Cys Gln Pro Met Glu E--> 274 545 550 555 560 275 Gly Thr Ala Thr Cys Asn Gly Ser Gly Ser Asp Thr Cys Ala Gln Cys E--> 276 565 570 575 277 Ala His Phe Arg Asp Gly Pro His Cys Val Ser Ser Cys Pro His Gly E--> 278 580 585 590 279 Val Leu Gly Ala Lys Gly Pro Ile Tyr Lys Tyr Pro Asp Val Gln Asn E--> 280 595 600 605 281 Glu Cys Arg Pro Cys His Glu Asn Cys Thr Gln Gly Cys Lys Gly Pro E--> 282 610 615 620 283 Glu Leu Gln Asp Cys Leu Gly Gln Thr Leu Val Leu Ile Gly Lys Thr E--> 284 625 630 635 640 286 <210> SEO ID NO: 3 287 <211> LENGTH: 190 288 <212> TYPE: PRT 289 <213> ORGANISM: Homo sapiens 291 <400> SEQUENCE: 3 292 Met Arg Ala Asn Asp Ala Leu Gln Val Leu Gly Leu Leu Phe Ser Leu E--> 293 1 5 10 15 294 Ala Arg Gly Ser Glu Val/Gly Asn Ser Gln Ala Val Cys Pro Gly Thr E--> 295 20 25 30 296 Leu Asn Gly Leu Ser Va/1 Thr Gly Asp Ala Glu Asn Gln Tyr Gln Thr E--> 297 35 40 45 298 Leu Tyr Lys Leu Tyr Élu Arg Cys Glu Val Val Met Gly Asn Leu Glu E--> 299 50 55 60 300 Ile Val Leu Thr Gl/ His Asn Ala Asp Leu Ser Phe Leu Gln Trp Ile

Same

E--> 301 65 70 75 80

DATE: 07/24/2006 RAW SEQUENCE LISTING TIME: 11:03:01 PATENT APPLICATION: US/10/516,759 Input Set : N:\DA\pto.da.txt Output Set: N:\CRF4\07242006\J516759.raw

302 Arg Glu Val Thr Gly Tyr Val Leu Val Ala Met Asn Glu Phe Ser Thr E--> 303 85 90 95 304 Leu Pro Leu Rro Asn Leu Arg Val Val Arg Gly Thr Gln Val Tyr Asp E--> 305 100 105 110 306 Gly Lys Phe Ala Ile Phe Val Met Leu Asn Tyr Asn Thr Asn Ser Ser E--> 307 115 120 125 308 His Ala Leu Arg the Leu Arg Leu Thr Gln Leu Thr Glu Ile Leu Ser E--> 309 130 135 140 310 Gly Gly Val Tyr Ile Glu Lys Asn Asp Lys Leu Cys His Met Asp Thr E--> 311 145 150 155 160 312 Ile Asp Trp Arg Asp \[ \text{Ile Val Arg Asp Arg Asp Ala Glu Ile Val Val \] E--> 313 165 170 175 314 Lys Asp Asn Gly Arg Ser Cys Pro Pro Cys His Glu Val Cys E--> 315 180 185 190 461 <210> SEQ ID NO: 14 462 <211> LENGTH: 82 463 <212> TYPE: PRT 464 <213> ORGANISM: Homo sapiens 466 <400> SEQUENCE: #14 467 Arg Gln Leu Cys Tyr His His Ser Leu Asn Trp Thr Lys Val Leu Arg E--> 468 1 5 10 15 469 Gly Pro Thr Glu Glu Arg Leu Asp Ile Lys His Asn Arg Pro Arg Arg E--> 470 20 25 30 471 Asp Cys Val Ala Glu Gly Mys Val Cys Asp Pro Leu Cys Ser Ser Gly E--> 472 35 40 45 473 Gly Cys Trp Gly Pro Gly Pro Gly Gln Cys Leu Ser Cys Arg Asn Tyr E--> 474 50 55 60 475 Ser Arg Gly Gly Val Cys Val Thr His Cys Asn Phe Leu Asn Gly Glu E--> 476 65 70 75 80 477 Pro Arg 495 <210> SEQ ID NO: 16 496 <211> LENGTH: 148 497 <212> TYPE: PRT 498 <213> ORGANISM: Homo saptiens 500 <400> SEQUENCE: 16 501 Met Val Cys Val Ala Ser/Cys Pro His Asn Phe Val Val Asp Gln Thr E--> 502 1 5 10 15 503 Ser Cys Val Arg Ala Cys Pro Pro Asp Lys Met Glu Val Asp Lys Asn E--> 504 20 25 30 505 Gly Leu Lys Met Cys Glu Pro Cys Gly Gly Leu Cys Pro Lys Ala Cys

507 Glu Gly Thr Gly Ser/Gly Ser Arg Phe Gln Thr Val Asp Ser Ser Asn E--> 508 50 55 60 509 Ile Asp Gly Phe Va/1 Asn Cys Thr Lys Ile Leu Gly Asn Leu Asp Phe E--> 510 65 70 75 80 511 Leu Ile Thr Gly Meu Asn Gly Asp Pro Trp His Lys Ile Pro Ala Leu E--> 512 85 90 95 513 Asp Pro Glu Lys/Leu Asn Val Phe Arg Thr Val Arg Glu Ile Thr Gly E--> 514 100 105 110

SAME

E--> 506 35 40 45

DATE: 07/24/2006

PATENT APPLICATION: US/10/516,759

TIME: 11:03:01

Input Set : N:\DA\pto.da.txt

Output Set: N:\CRF4\07242006\J516759.raw

515 Tyr Leu Asm Ile Gln Ser Trp Pro Pro His Met His Asn Phe Ser Val

E--> 516 115 120 125

517 Phe Ser Asn Leu Thr Thr Ile Gly Gly Arg Ser Leu Tyr Asn Arg Gly

E--> 518 130 135 140 /

519 Phe Ser Lew Leu

520 145

SAME Erron

7/24/2006

VERIFICATION SUMMARYDATE: 07/24/2006PATENT APPLICATION: US/10/516,759TIME: 11:03:02

Input Set : N:\DA\pto.da.txt

```
L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date
 L:30 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
 L:32 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
 L:34 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
 L:36 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
 L:38 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
 J.: 40 M: 332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID: 1
  L:42 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:44 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:46 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:48 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:50 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:52 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:54 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:56 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:58 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:60 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:62 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
, L:64 M:332 E: (32) Invalid/Missing Amino Acid Mumbering, SEQ ID:1
  L:66 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:68 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:70 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:72 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:74 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:76 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:78 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:80 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:82 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:84 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:86 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:88 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:90 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:92 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:94 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:96 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:98 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:100 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:102 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:104 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:106 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:108 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:110 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:112 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:114 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:116 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:118 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:120 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
  L:122 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
```

VERIFICATION SUMMARYDATE: 07/24/2006PATENT APPLICATION: US/10/516,759TIME: 11:03:02

Input Set : N:\DA\pto.da.txt

```
L:124 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:126 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:128 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:130 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:132 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:134 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:136 M:332 E: (32) Invalid/Missing-Amino Acid Numbering, SEQ ID:1
L:138 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:140 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:142 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:144 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:146 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:148 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:150 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:152 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:154 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:156 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:158 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
IF160 Me332 E: (32) Invalid/Missimg Amino Acid Numbering, SEQ ID:1
L:162 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:164 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:166 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:168 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:170 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:172 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:174 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:176 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:178 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:180 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:182 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:184 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:186 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:188 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:190 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:192 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:194 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:196 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:1
L:206 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:208 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:210 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:212 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:214 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:216 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:218 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:220 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:222 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:224 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:226 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:228 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
```

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/516,759

DATE: 07/24/2006

TIME: 11:03:02

Input Set : N:\DA\pto.da.txt

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L:230 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:232 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:234 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:236 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:238 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:240 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:242 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:244 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:246 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:248 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:250 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:252 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:254 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:256 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:258 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:260 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:262 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:264 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
-L:266 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:20 10000
L:268 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:270 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:272 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:274 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:276 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:278 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:280 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:282 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:284 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:293 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:3
L:295 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:3
L:297 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:3
L:299 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:3
L:301 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:3
L:303 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:3
L:305 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:3
L:307 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:3
L:309 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:3
L:311 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:3
L:313 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:3
L:315 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:3
L:468 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:14
L:470 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:14
L:472 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:14
L:474 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:14
L:476 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:14
L:502 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:16
L:504 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:16
L:506 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:16
L:508 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:16
```

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/516,759

DATE: 07/24/2006 TIME: 11:03:02

Input Set : N:\DA\pto.da.txt

L:510 N	M:332	E:	(32)	Invalid/Missing	Amino	Acid	Numbering,	SEQ	ID:16
L:512 N	M:332	E:	(32)	Invalid/Missing	Amino	Acid	Numbering,	SEQ	ID:16
L:514 N	M:332	E:	(32)	Invalid/Missing	Amino	Acid	Numbering,	SEQ	ID:16
L:516	M:332	E:	(32)	Invalid/Missing	Amino.	Acid	Numbering,	SEQ	ID:16
L:518	M:332	E:	(32)	Invalid/Missing	Amino	Acid	Numbering,	SEQ	ID:16